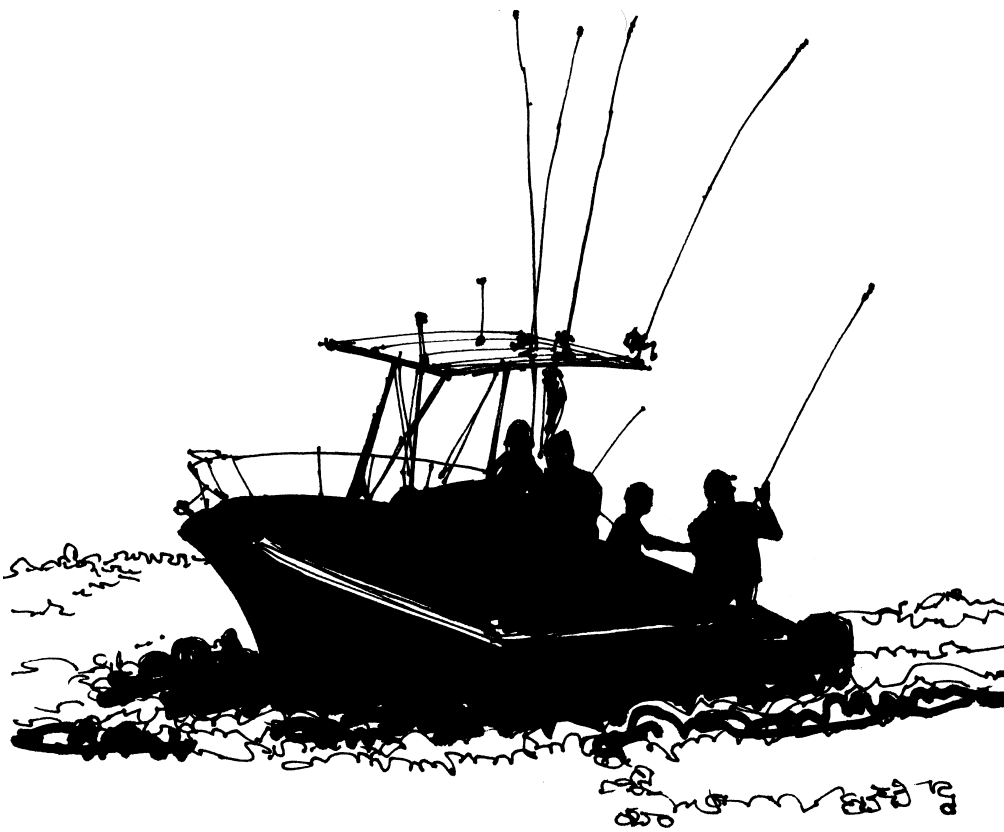


Environmental Consequences of Alternatives



4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This section describes the predicted impacts to those components of the natural, built, and human environment described in Section 3 (Affected Environment) for each alternative defined in Section 2 (Alternatives Including the Proposed Action). NEPA requires that the analysis of alternatives consider seven types of impacts: direct, indirect, cumulative, short-term, long-term, irreversible and irretrievable (CEQ Regulations at 40 CFR 1508.25; NEPA section 102[2][C][iv][v]). The alternatives analyses in this section focus on the assessment of direct, indirect and cumulative effects.

Direct effects are caused by the action and occur at the same time and place (CEQ Regulations at 40 CFR 1508.8).

Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (CEQ Regulations at 40 CFR 1508.8).

Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (CEQ Regulations at 40 CFR 1508.7).

Predicted environmental effects of this nature are described in this section by environmental resource. Given the six-year duration of the Proposed Action, the effects are predicted to be primarily short-term in nature. No irreversible impacts associated with the Proposed Action and alternatives are predicted to occur. Long-term and irretrievable impacts are discussed with direct effects.

In order to evaluate the potential severity of environmental effects, metrics are used to characterize the magnitude and intensity of the effect. The metrics used in this analysis include:

No effect: Not measurable or expected, or of such a rare occurrence that it would be impossible to measure or detect.

Low effect: Measurable but of small amount or infrequent occurrence.

Moderate effect: Measurable at some level between low and substantial.

Substantial effect: A high impact that is measurable and/or expected, or likely to occur more frequently than anticipated.

Predicted environmental effects are quantified where possible, but for several resources where quantifiable information is not available, the analysis relies on qualitative assessments and best professional judgment.

Section 4.2 (following) describes the basis for the comparison of alternatives, and describes the analysis approach. The analyses in this section follow the order of resource issues described in

Section 4 – Environmental Consequences

- 1 Section 3, Affected Environment. For example, the fish resource was described in Subsection 3.3, and
2 the alternatives analysis for fish is found in Subsection 4.3. Discussions of the natural, built and human
3 environment are organized as follows:

| Section 4 Subsections | Natural Environment | Built Environment | Human Environment |
|---|---------------------|-------------------|-------------------|
| 4.3.1 and 4.3.2: Status of salmonid species | X | | |
| 4.3.3: Other fishes | X | | |
| 4.3.4: Fish habitat | X | | |
| 4.3.5 through 4.3.7: Potential ecological effects of alternative harvest activities | X | | |
| 4.4: Tribal treaty rights and trust responsibilities | | | X |
| 4.5: Non-commercial use of salmonids by Puget Sound tribes | | | X |
| 4.6: Regional economics of commercial and sport fisheries | | | X |
| 4.7: Environmental justice | | | X |
| 4.8.1 through 4.8.3 and 4.8.5: Seabirds, marine mammals, and other wildlife species | X | | |
| 4.8.4: Lower trophic-level species | X | | |
| 4.9: Land ownership and land use | | X | |
| 4.10: Water quality | X | | |

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